

AMENDMENTS TO THE CLAIMS

Claim 1 (Canceled)

Claim 2 (Currently Amended) A laser welding ~~method, method, which comprises; in a laser welding method of comprising;~~

varying a waveform and a frequency of a laser output in a controlled manner so as to prevent occurrence of weld ~~defects; defects;~~

detecting a time change in light emission strength of a plasma or a plume generated from a laser welded ~~portion; portion;~~

analyzing ~~the~~ frequency characteristics of the light emission to obtain an amplitude of a frequency component which is the same ~~or near a~~ variation frequency of the laser ~~output; output;~~ and

setting a laser output variation condition so that the amplitude of the frequency component becomes maximum.

Claim 3 (Currently Amended) ~~The A laser welding method, method according to claim 1, which comprises; in a laser welding method of comprising;~~

varying a waveform and a frequency of a laser output in a controlled manner so as to prevent occurrence of weld ~~defects; defects;~~

detecting ~~the~~ a time change in the light emission strength of ~~the~~ a plasma or a plume generated from ~~the~~ a laser welded ~~portion; portion;~~

setting an arbitrary threshold value to the time change in the light emission strength of the plasma or ~~the~~ plume; plume; and

setting ~~the~~ a laser output variation condition so that a sum of time at which the light emission strength becomes the threshold value or less becomes minimum.

Claim 4 (Currently Amended) The laser welding method according to claim 3, wherein ~~which comprises~~ setting ~~that~~ the laser output variation condition so that the sum of the time at which the light emission strength becomes the threshold value or less is set for a longer time than 2 ms ~~a predetermined time becomes minimum.~~

Claim 5 (Currently Amended) The laser welding method according to claim 2, further comprising:

~~which comprises; in a laser welding method of varying a waveform and a frequency of a laser output in a controlled manner so as to prevent occurrence of weld defects, detecting the time change in the light emission strength of the plasma or plume generated from the laser welded portion;~~

setting an arbitrary threshold value to the time change in the light emission strength of the plasma or the plume, and

setting the laser output variation condition so that a sum of time at which the light emission strength becomes the threshold value or less becomes minimum.

Claim 6 (Currently Amended) The laser welding method according to claim 5, wherein ~~which comprises setting that the laser output variation condition so that the sum of the time at which the light emission strength becomes the threshold value or less is set for a longer time than 2 ms a predetermined time becomes minimum.~~